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09/405,031	09/24/1999	DOUGLAS R. COFFLAND	IL-10360	9034

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LLOYD E DAKIN JR
ASSISTANT LABORATORY COUNSEL
LAWRENCE LIVERMORE NATIONAL LABORATORY
P O BOX 808-L-703
LIVERMORE, CA 94551

EXAMINER	
BETIT, JACOB F	

ART UNIT	PAPER NUMBER
2175	4

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Please find below and/or attached an Office communication concerning this application or proceeding.

4

Office Action Summary	Application No. 09/405,031	Applicant(s) COFFLAND, DOUGLAS R.D	
	Examiner Jacob F. Betit	Art Unit 2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-30 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-30 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The arrangement of the disclosed application does not conform with 37 CFR 1.77(b).

Section headings are underlined through the disclosed specification. Section headings should not be underlined and/or **boldfaced**. Appropriate corrections are required according to the guidelines provided below:

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noll et al. (U.S. patent No. 5,732,138) in view of Owashi et al. (U.S. patent No. 6,363,210 B1)

As to claim 1, Noll et al. teaches a system (see Abstract) comprising:

a media signal (see column 4, lines 58-66);

a data acquisition module coupled to receive and select a set of data (see figure 1, steps 100 and 105); and

a hashing module coupled to receive and hash the set of data into a keyword (see column 4, lines 20-23, where "keyword" is read on "seed").

Noll et al. does not teach multimedia encryption, and he does not teach a data compression module coupled to receive and compress the media signal into a compressed data stream and from the compressed data stream.

Owashi et al. teaches multimedia encryption (see column 1, lines 21-23), and he teaches a data compression module coupled to receive and compress the media signal into a compressed data stream and from the compressed data stream (see column 9, lines 6-10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. to include multimedia encryption, and a data compression module coupled to receive and compress the media signal into a compressed data stream and from the compressed data stream.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. by the teachings of Owashi et al., because multimedia encryption would allow the multimedia provider charge money for access to the data stream (see Owashi et al., column 1, lines 21-23), and because a data compression module coupled to receive and compress the media signal into and from a compressed data stream would decrease the amount of data necessary for transmission (see Owashi et al., column 5, lines 59-62).

As to claim 2, Noll et al. as modified, teaches wherein the set of data is one frame of data within the compressed data stream (see Noll et al., column 4, lines 61-62).

As to claim 3, Noll et al. as modified, teaches wherein the set of data crosses over several frame boundaries within the compressed data stream (see Noll et al., column 4, lines 60-61).

As to claims 4, 13, 20, and 27, Noll et al. as modified, teaches wherein the compressed data stream includes compression transform coefficients (see Owashi et al., column 9, lines 6-10, where "compression transform coefficients" are a part of MPEG compression); and

the set of data (see Noll et al., column 4, lines 60-61) includes a set of compression transform coefficients (see Owashi et al., column 9, lines 6-10).

As to claims 5, 14, 21, and 28, Noll et al., as modified, teaches wherein:

the compressed data stream includes data frames of varying length (see Owashi et al., column 9, lines 9-13 where "frames of varying length" are made when compressing to MPEG format); and

the set of data includes a set of data frames (see Noll et al., column 4, lines 60-61 and see lines 64-66).

As to claims 6, 15, 22, and 29, Noll et al. as modified, teaches wherein:

the compressed data stream includes predictive data frames (see Noll et al., column 2, lines 7-8); and

the set of data includes a predictive data frame (see Noll et al., column 2, lines 7-8, see column 4, lines 60-62, and see figure 1, steps 100 and 105).

As to claim 7, Noll et al. as modified, teaches wherein the media signal includes a noise signal amplitude (see Noll et al., column 4, lines 60-62, where "noise signal amplitude" is part of all transmitted signals);

further comprising,

an analog to digital converter (see Noll et al., column 2, line 3), having a quantization step size smaller than the noise signal amplitude coupled to receive and quantize the media signal (see Noll et al., column 1, line 67 through column 2, line 1, where it is assumed that in order to convert the noise from the diode into a signal not only does the frequency of the sample have to be suitable, but also "a quantization step size smaller than the noise signal amplitude" must exist); and

wherein the data compression module compresses the quantized media signal into a compressed data stream (see Owashi et al., column 9, lines 5-10).

As to claim 8, Noll et al. as modified, teaches wherein the data compression module compresses the media signal into one from a group

consisting of: MJPEG, MPEG1, MPEG2, or MPEG4, H.261, H.320, and H.323 formats (see Owashi et al., column 9, lines 5-13, see column 5, lines 59-62, and see column 14, lines 29-31).

As to claim 9, Noll et al. as modified, teaches further comprising:

a pseudo-random number generator coupled to receive and process the keyword in to a set of keywords (see Noll et al., column 4, lines 23-26).

As to claim 10, Noll et al. teaches a method (see Abstract) comprising the steps of:

selecting a set of data (see figure 1, steps 100 and 105); and

hashing the set of data into a keyword (see column 4, lines 20-23 where "keyword" is read on "seed").

Noll et al. does not teach multimedia encryption; he does not teach compressing a media signal; and he does not teach set of data from the compressed media signal.

Owashi et al. teaches multimedia encryption (see column 1, lines 21-23); he teaches compressing a media signal (see column 9, lines 6-10); and he teaches set of data from the compressed media signal (see column 9, lines 6-10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. to include

multimedia encryption; compressing a media signal; and set of data from the compressed media signal.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. by the teachings of Owashi et al., because multimedia encryption would allow the multimedia provider to charge money for access to the data stream (Owashi et al., column 1, lines 21-23); because compressing a media signal would decrease the amount of data necessary for transmission (see Owashi et al., column 5, lines 59-62); and because set of data from the compressed media signal would be an easy place to pull random data from to generate a random number.

As to claims 11, 18, and 25, Noll et al. as modified, teaches wherein:

the compressed media signal includes data frames (see Owashi et al., column 9, lines 5-10); and

the selecting step includes the step of selecting one frame of data (see Noll et al., column 4, lines 61-62).

As to claims 12, 19, and 26, Noll et al. as modified, teaches wherein:

the compressed media signal includes data frames and data frame boundaries (see Owashi et al., column 9, lines 5-13, where "data frames" are recognized to vary in size in MPEG format); and

the selecting step includes the step of selecting a set of data which

crosses over several data frame boundaries (see Noll et al. column 4, lines 61-62).

As to claims 16, 23, and 30, Noll et al. as modified, teaches wherein the media signal includes a noise signal amplitude (see Noll et al., column 4, lines 60-62, where "noise signal amplitude" is part of all signals);

further comprising the step of quantizing the media signal with a quantization step size smaller than the noise signal amplitude (see Noll et al., column 1, line 67 through column 2, line 1, where it is assumed that in order to convert the noise from the diode into a signal not only does the frequency of the sample have to be suitable, but also "a quantization step size smaller than the noise signal amplitude" must exist); and

wherein the compressing step includes the step of compressing the quantized media signal (see Owashi et al., column 9, lines 5-10).

As to claim 17, Noll et al. teaches a system, comprising:

means for selecting a set of data (see figure 1, steps 100 and 105); and

means for hashing the set of data into a keyword (see column 4, lines 20-23, where "keyword" reads on "seed").

Noll et al. does not teach multimedia encryption; he does not teach means for compressing a media signal; and he does not teach set of data from the compressed media signal.

Owashi et al. teaches multimedia encyption (see column 1, lines 21-23; he teaches means for compressing a media signal (see column 9, lines 6-10); and he teaches set of data from the compressed media signal (see column 9, lines 6-10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. to include multimedia encryption; means for compressing media signal; and set of data from the compressed media signal.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. by the teachings of Owashi et al., because multimedia encryption would allow the multimedia provider to charge money for access to the data stream (see Owashi et al., column 1, lines 21-23); because means for compression media signal would decrease the size of the data stream that needs to be transmitted (see Owashi et al., column 5, lines 59-62); and because set of data from the compressed media signal would be an easy place to pull random data from to generate the random number.

As to claim 24, Noll et al. teaches a computer-useable medium embodying computer program code (see column 6, lines 36-50) by executing the steps of:

selecting a set of data (see figure 1, steps 100 and 105); and

hashing the set of data into a keyword (see column 4, lines 20-23 where "keyword" is read on "seed").

Noll et al. does not teach multimedia encryption; he does not teach compressing a media signal; and he does not teach set of data from the compressed media signal.

Owashi et al. teaches multimedia encryption (see column 1, lines 21-23); he teaches compressing a media signal (see column 9, lines 6-10); and he teaches set of data from the compressed media signal (see column 9, lines 6-10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. to include multimedia encryption; to include compressing a media signal; and to include set of data from the compressed media signal.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Noll et al. by the teachings of Owashi et al. because multimedia encryption would allow the multimedia provider to charge money for access to the data stream (see Owashi et al., column 1, lines 21-23); because compressing a media signal would decrease the amount of data necessary for transmission (see Owashi et al., column 5, lines 59-62); and because set of data from the compressed media signal would be an easy place to pull random data from to generate a random number.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the sate of art with respect to media encryption in general.

U.S. Patent No. 6,526,144 B2 to Markandey et al. for teaching a data protection system over a communication medium.

U.S. Patent No. 4,545,024 to Maher et al. for teaching a random number generator.

U.S. Patent No. 5,757,923 to Koopman, Jr. for a method of generating a secret identification key with a fan and a microphone.

U.S. Patent No. 6,570,990 B1 to Kohn et al. for a method of protecting high definition video signal.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Betit whose telephone number is (703) 305-3735. The examiner can normally be reached on Monday through Friday 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on (703) 305-3830. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

jfb
October 2, 2003

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100